

Type VODL/N116... counterbalance valves

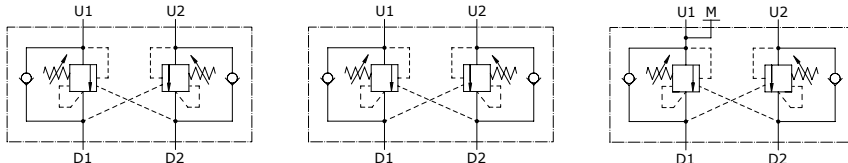
- Double acting
- Load Sensitive (type N)
- Relief Compensated (type R)

Port size —
VODL/N116/38/G3.p4/ac

Port size —
VODL/N116/38PB/G3.p4/ac

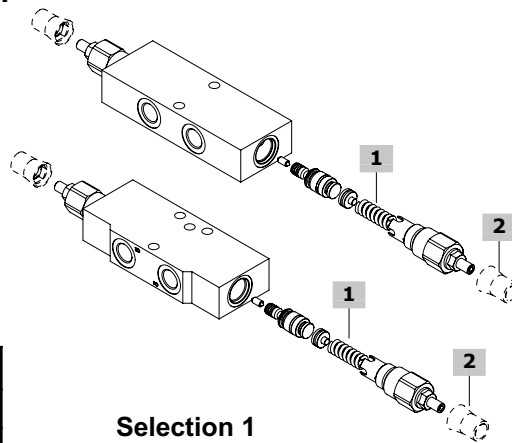
Type	Selection 1	Selection 2	Selection 3	Nominal flow	Max. pressure	ports	weight
				l/min(US gpm)	bar(psi)		Kg(lb)
VODL/N116/38	3/5	G/Z	p0/p4/p8	60(15.9)	210(3050)	All G3/8	0.91(2.01)
VODL/N116/38 ac				60(15.9)	350(5100)	All G3/8	1.91(4.21)
VODL/N116/38PB				60(15.9)	210(3050)	All G3/8	0.91(2.01)
VODL/N116/38PB ac				60(15.9)	350(5100)	All G3/8	1.91(4.21)
VODL/N116/38F1				60(15.9)	210(3050)	G3/8 G1/4 Ø8.5Ø0.335	0.91(2.01)
VODL/N116/38F1 ac				60(15.9)	350(5100)	G3/8 G1/4 Ø8.5Ø0.335	1.91(4.21)
VODL/N116/38F2				60(15.9)	210(3050)	G3/8 G1/4 Ø8.5Ø0.335	0.91(2.01)
VODL/N116/38F2 ac				60(15.9)	350(5100)	G3/8 G1/4 Ø8.5Ø0.335	1.91(4.21)
VODL/N116/12				60(15.9)	210(3050)	All G1/2	1.13(2.49)
VODL/N116/12 ac				60(15.9)	350(5100)	All G1/2	2.55(5.62)
VODL/N116/12PB				60(15.9)	210(3050)	All G1/2	1.13(2.49)
VODL/N116/12PB ac				60(15.9)	350(5100)	All G1/2	2.55(5.62)
VODL/N116/12F1				60(15.9)	210(3050)	G1/2 G1/4 Ø8.5Ø0.335	1.13(2.49)
VODL/N116/12F1 ac				60(15.9)	350(5100)	G1/2 G1/4 Ø8.5Ø0.335	2.55(5.62)
VODL/N116/12F2				60(15.9)	210(3050)	G1/2 G1/4 Ø8.5Ø0.335	1.13(2.49)
VODL/N116/12F2 ac				60(15.9)	350(5100)	G1/2 G1/4 Ø8.5Ø0.335	2.55(5.62)
VODL/R116/S8				60(15.9)	210(3050)	SAE8	0.91(2.01)
VODL/R116/S8 ac				60(15.9)	350(5100)	SAE8	1.91(4.21)
VODL/R116/S8F1				60(15.9)	210(3050)	SAE8 G1/4 Ø8.5Ø0.335	0.91(2.01)
VODL/R116/S8F1 ac				60(15.9)	350(5100)	SAE8 G1/4 Ø8.5Ø0.335	1.91(4.21)
VODL/R116/S8F2				60(15.9)	210(3050)	SAE8 G1/4 Ø8.5Ø0.335	0.91(2.01)
VODL/R116/S8F2 ac				60(15.9)	350(5100)	SAE8 G1/4 Ø8.5Ø0.335	1.91(4.21)
VODL/R116/S10				60(15.9)	210(3050)	SAE10	1.13(2.49)
VODL/R116/S10 ac				60(15.9)	350(5100)	SAE10	2.55(5.62)
VODL/R116/S10F1				60(15.9)	210(3050)	SAE10 G1/4 Ø8.5Ø0.335	1.13(2.49)
VODL/R116/S10F1 ac				60(15.9)	350(5100)	SAE10 G1/4 Ø8.5Ø0.335	2.55(5.62)
VODL/R116/S10F2				60(15.9)	210(3050)	SAE10 G1/4 Ø8.5Ø0.335	1.13(2.49)
VODL/R116/S10F2 ac				60(15.9)	350(5100)	SAE10 G1/4 Ø8.5Ø0.335	2.55(5.62)

Type	Execution	Operation / Features	Max. flow up to		Max.press. up to	
			l/min	US gpm	bar	psi
VODL/N1116 VODL/N1116/PB	double acting	load sensitive	60	15.9	210 alum. body 350 steel body	3050 alum. body 5100 steel body

Hydraulic diagram

Ordering codes and description

Port size
VODL/N1116/38/G3.p4/ac
2 1

Port size
VODL/N1116/38PB/G3.p4/ac
2 1


Selection 2

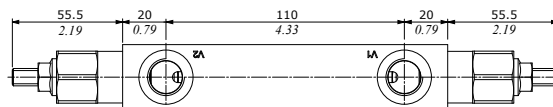
TYPE	DESCRIPTION
G	Screw setting
Z	Antitampering cap

Selection 3

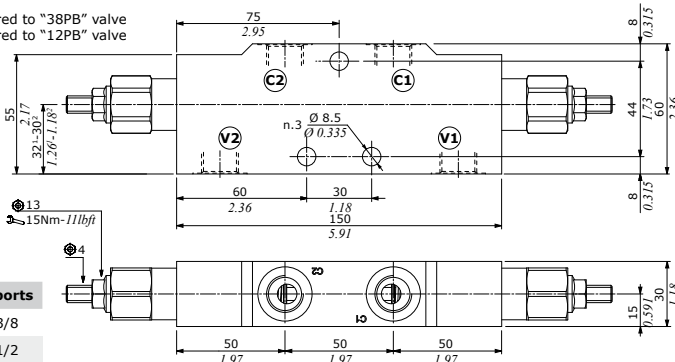
TYPE	DESCRIPTION
p0	pilot ratio 0
p4	pilot ratio 1:4
p8	pilot ratio 1:8

Selection 1

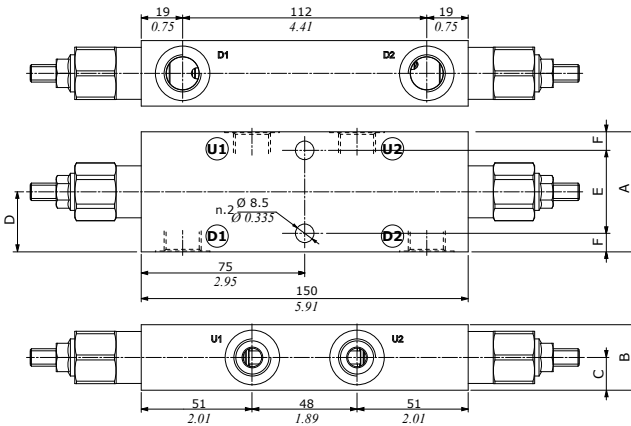
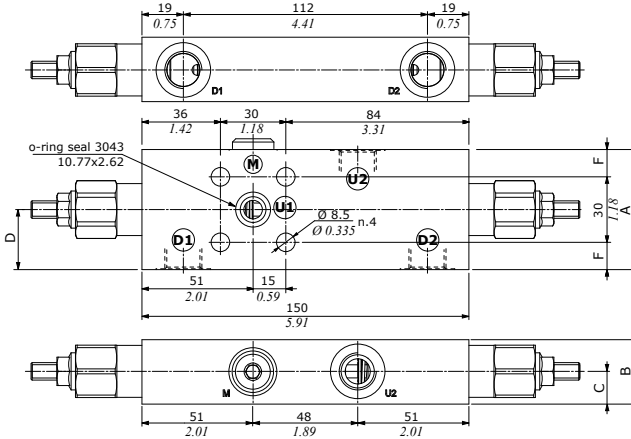
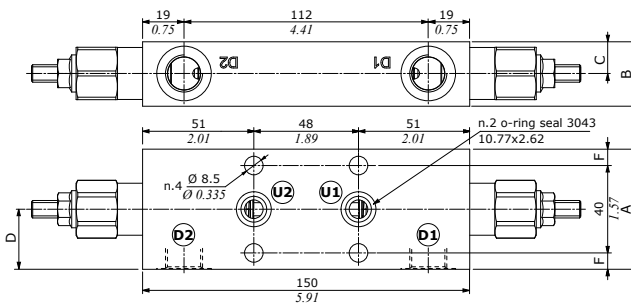
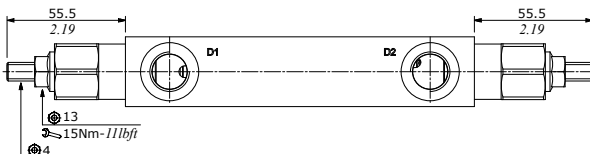
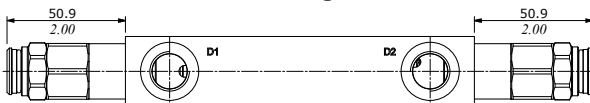
TYPE	DESCRIPTION
For 1:4 and zero differential pilot ratio	
3	For range 50-210 bar (725-3050 psi)
5	For range 150-350 bar (2175-5075 psi)
For 1:8 pilot ratio	
5	For range 180-350 bar (2610-5075 psi)

Dimensions
VODL/N1116/38PB - VODL/N1116/12PB

NOTES

(¹): dimension referred to "38PB" valve
 (²): dimension referred to "12PB" valve



Valve type	All ports
VODL/N1116/38PB	G3/8
VODL/N1116/12PB	G1/2

Dimensions
VODL/...1116/38 - VODL/...1116/12

VODL/...1116/38F1 - VODL/...1116/12F1

VODL/...1116/38F2 - VODL/...1116/12F2

VODL/N configuration

VODL/R configuration


Valve type	D1	D2	U1	U2	M
VODL/...1116/38	G3/8	G3/8	G3/8	G3/8	-
VODL/...1116/12	G1/2	G1/2	G1/2	G1/2	-
VODL/...1116/38F1	G3/8	G3/8	Ø8.5 - Ø0.335	G3/8	G1/4
VODL/...1116/12F1	G1/2	G1/2	Ø8.5 - Ø0.335	G1/2	G1/4
VODL/...1116/38F2	G3/8	G3/8	Ø8.5 - Ø0.335	Ø8.5 - Ø0.335	-
VODL/...1116/12F2	G1/2	G1/2	Ø8.5 - Ø0.335	Ø8.5 - Ø0.335	-

Valve type	D1	D2	U1	U2	M
VODL/...1116/S8	SAE8	SAE8	SAE8	SAE8	-
VODL/...1116/S10	SAE10	SAE10	SAE10	SAE10	-
VODL/...1116/S8F1	SAE8	SAE8	Ø8.5 - Ø0.335	SAE8	G1/4
VODL/...1116/S10F1	SAE10	SAE10	Ø8.5 - Ø0.335	SAE10	G1/4
VODL/...1116/S8F2	SAE8	SAE8	Ø8.5 - Ø0.335	Ø8.5 - Ø0.335	-
VODL/...1116/S10F2	SAE10	SAE10	Ø8.5 - Ø0.335	Ø8.5 - Ø0.335	-

Dimensions are in mm-in

Valve type	A	B	C	D	E	F	G
VODL/...1116/38	55	30	15	27.5	38	8.5	8.5
VODL/...1116/S8	2.17	1.18	0.59	1.08	1.50	0.334	0.334
VODL/...1116/12	65	35	17.5	32.5	43	11	11
VODL/...1116/S10	2.26	1.38	0.69	1.28	1.69	0.433	0.433
VODL/...1116/38F1	55	29.5	15	27.5	30	7.5	7.5
VODL/...1116/s8F1	2.17	1.16	0.59	1.08	1.18	0.295	0.295
VODL/...1116/12F1	65	34.5	17	32.5	30	17.5	17.5
VODL/...1116/S10F1	2.26	1.36	0.67	1.28	1.18	0.69	0.69
VODL/...1116/38F2	55	29.5	14.5	27.5	40	7.5	7.5
VODL/...1116/S8F2	2.17	1.16	0.57	1.08	1.57	0.295	0.295
VODL/...1116/12F2	65	34.5	17	32.5	40	12.5	12.5
VODL/...1116/S10F2	2.26	1.36	0.67	1.28	1.57	0.49	0.49

Rating diagrams
VODL/(N-R) 1116 (38-12) pressure drop vs. flow from D1->U1 and U1->D1 (D2->U2 and U2->D2)
